NORTH DAKOTA
DEPARTMENT of HEALTH

HEALTH ALERT NETWORK

JULY 28, 2005

HEALTH UPDATE

Guidelines for Providers Seeing Patients Exposed To or With Symptoms of Naturally Occurring Anthrax

The Anthrax epizootic continues in southeastern North Dakota. The State Veterinarian's office, as of July 27, has reported more than 100 animal deaths from anthrax. Although the risk of people acquiring anthrax while working with anthrax-infected livestock is low, health-care providers should increase their suspicion of anthrax when seeing patients who work with livestock and who present with compatible symptoms. **All anthrax cases should be reported to the North Dakota Department of Health by calling 800.472.2180.** The North Dakota Department of Health offers the following guidelines for health-care providers.

Follow these guidelines for handling patients without symptoms compatible with anthrax:

Asymptomatic patient WITHOUT known exposure to infected animals:

a. Prescribing antibiotics without known exposure is NOT recommended in any situation.
b. There is no "screening" test available for anthrax.
c. Decontaminating the patient, other than washing with soap and water, is NOT routinely recommended.
d. Provide reassurance to the patient about the rarity of infection without known exposure. Provide patient education regarding signs and symptoms.

Asymptomatic patient WITH potential exposure to infected animals:

a. Conduct an individual risk assessment. If necessary, contact state or local health departments. In general, the risk of transmission from an infected animal to humans is low. This risk increases as the extent of direct contact with blood or bloody fluids increases.
b. There are no recommendations to initiate preventive treatment for potential exposures to naturally occurring disease. If an exposure warrants preventive treatment see Table 1.
c. Decontaminating the patient, other than washing with soap and water, is NOT routinely recommended.
d. Provide reassurance to the patient along with patient education regarding signs and symptoms.

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Table 1. Treatment and Post-Exposure Prophylaxis (PEP) Recommendations		
Patient	Initial therapy	Duration
Adults (including pregnant women [1,2] and immmunocompromised)	Ciprofloxacin 500 mg po BID **OR** Doxycycline 100 mg po BID	*See Table 2
Children [1,3]	Ciprofloxacin 15-20 mg/kg po Q12 hrs[4] **OR** Doxycycline[5]: >8 yrs and >45 kg: 100 mg po BID >8 yrs and ≤ 45 kg: 2.2 mg/kg po BID ≤ 8 yrs: 2.2 mg/kg po BID	*See Table 2

[1] If susceptibility testing indicates susceptibility, therapy should be changed to oral amoxicillin for post-exposure prophylaxis to continue for 60 days.
[2] Although tetracyclines are not recommended during pregnancy, their use may be indicated for life-threatening illness. Adverse affects on developing teeth and bones are dose related, therefore, doxycycline might be used for a short course of therapy (7-14 days) prior to the 6th month of gestation. Consult physician after the 6th month of gestation for recommendations.
[3] Use of tetracyclines and fluoroquinolones in children has adverse effects. These risks must be weighed carefully against the risk for developing life-threatening disease. If a release of *B. anthracis* is confirmed, children should be treated initially with ciprofloxacin or doxycycline as prophylaxis but therapy should be changed to oral amoxicillin 80 mg/kg of body mass per day divided every 8 hours (not to exceed 500 mg three times daily) as soon as penicillin susceptibility of the organism has been confirmed.
[4] Ciprofloxacin dose should not exceed 1 gram/day in children.
[5] In 1991, the American Academy of Pediatrics amended their recommendation to allow treatment of young children with tetracyclines for serious infections, such as Rocky Mountain spotted fever, for which doxycycline may be indicated. Doxycycline is preferred for its twice-a-day dosing and low incidence of gastrointestinal side effects.

Guidelines for handling patients with symptoms compatible with anthrax

1. Confirm the diagnosis by obtaining the appropriate laboratory specimens based on the clinical form of anthrax that is suspected (inhalational, gastrointestinal, or cutaneous). (Table 2)

2. Anthrax vaccine is **NOT** available for pre/post-exposure prophylaxis in any situation.

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Table 2. Clinical Aspects of Anthrax			
	Cutaneous Anthrax	Inhalational Anthrax	Gastrointestinal Anthrax
Incubation	1 to 12 days	1 to 7 days possibly up to 60	1 to 7 days
Symptoms	A skin lesion starting as a papule and going through a vesicular stage and ending in a black depressed eschar. Fever and localized lymphadenopathy may also occur.	Initial symptoms are flu like and may include fever, body ache, malaise, cough and sore throat. Disease progresses rapidly to pneumonia with hypoxia and possibly meningitis. Respiratory failure follows. Mediastinal widening and pleural effusion is evident on x-ray.	Abdominal distress followed by fever. Oropharyngeal lesions may also occur. Symptoms may include nausea, vomiting, dysphagia, fever, regional lymphadenopathy, vomiting blood and bloody diarrhea.
Route of Transmission	Entry of spores through opening in the skin – the most common type of naturally occurring anthrax.	Inhalation of spores. It is estimated that the infectious dose is between 8,000 and 40,000 spores.	Ingesting spores found on contaminated raw or undercooked meat.
Diagnosis	Culture of exudates or aspirate of the skin lesion or blood culture	Blood culture or CSF culture	Blood culture
Comments	Although this is the most common form of naturally occurring disease, the risk of human infection from infected animals is low.	Very rare form of the disease. Intentional releases of anthrax have been associated with inhalational disease.	Very rare form of the disease, results from the ingestion of undercooked meat from infected animals.
Length of Treatment Regimen	7-10 days*	60 Days	60 Days
Length of Prophylaxis Regimen	7-10 days*	60 Days	60 Days

*60 days in the case of an intentional release

Categories of Health Alert messages:

- *Health Alert conveys the highest level of importance; warrants immediate action or attention.*
- *Health Advisory provides important information for a specific incident or situation; may not require immediate action.*
- *Health Update provides updated information regarding an incident or situation; no immediate action necessary.*
- *Health Information provides general information that is not necessarily considered to be of an emergent nature.*

This message is being sent to local public health units, clinics, hospitals, physicians, tribal health, North Dakota Nurses Association, North Dakota Long Term Care Association, North Dakota Healthcare Association, North Dakota Medical Association, and hospital public information officers.

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